

A new species of *Gompholobium* (Fabaceae: Mirbelieae) from the Pilbara bioregion of Western Australia

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Abstract

Wilkins, C.F. & Trudgen, M.E. A new species of *Gompholobium* (Fabaceae: Mirbelieae) from the Pilbara bioregion of Western Australia. *Nuytsia* 22(1): 31–40 (2012). *Gompholobium oreophilum* C.F.Wilkins & Trudgen, a new species from the Pilbara bioregion of Western Australia, is described and compared to its close relatives *G. karijini* Chappill and *G. polyzygum* F.Muell. The different habitat preferences and the possible hybridisation between *G. oreophilum* and *G. karijini*, which is also endemic to the Pilbara, are discussed. A key and distribution maps are provided.

Introduction

Gompholobium Sm. is an Australasian genus of 44 species in tribe Mirbelieae of the Fabaceae (Chappill *et al.* 2008). It is found in all Australian States and mainland Territories and extends outside Australia to Wetar Island in the Lesser Sunda Islands, and New Guinea. While it is species-rich in the south-west of Western Australia, *Gompholobium* is less diverse in the more arid parts of the State, and the new species described herein increases the known diversity of the genus in the Pilbara bioregion from one species to two.

Gompholobium was first described by Smith (1798) who gave the distinguishing features of the genus as a ventricose fruit with numerous seeds, ternate or imparipinnate leaves and large, yellow flowers. Recently, in a revision of *Gompholobium*, Chappill *et al.* (2008) gave modified distinguishing features, including the separation of the calyx lobes nearly to the hypanthium, a feature shared in the tribe with *Jacksonia* R.Br. ex Sm., *Leptosema* Benth. and *Latrobea* Meisn., and the inflated globose or ellipsoid fruit, a feature shared with *Sphaerolobium* Sm. In addition, Chappill *et al.* (2008) indicated that seeds of all observed *Gompholobium* species have much longer (> 2 mm) funicles than those of other observed legume genera, a feature also noted by Cameron (1988) in a study of the embryology of Australian legume genera.

Chappill *et al.* (2008) also described a new species, *G. karijini* Chappill, to separate material from the Hamersley Range from the somewhat similar *G. polyzygum* F.Muell., which occurs to the east and south of the Pilbara bioregion. Chappill noted that the new species was variable; the type specimen is almost glabrous, while the remainder of the collections included by Chappill in *G. karijini* are villous.

This paper describes the villous entity as a new species, *G. oreophilum* C.F. Wilkins & Trudgen, and compares it to its closest relatives, *G. polyzygum* and *G. karijini*.

Methods

This study is based on examination of fresh material, and herbarium specimens housed at PERTH. Habitat and lithology information was derived from Griffin and Trudgen (2009) supplemented by a small amount of targeted field work.

Taxonomic treatment

Species in the *G. polyzygum* complex have imparipinnate leaves with 4–21 leaflet pairs, leaflets with flat margins and flowers with yellow to yellow-orange petals.

Key to species of the *Gompholobium polyzygum* complex

1. Plants glabrous or very sparsely hairy, with calyces glabrous except for lobe margins **G. karijini**
- 1: Plants ± densely hairy, especially on branchlets and calyces
 2. Leaves mostly with > 10 pairs of overlapping leaflets; leaflets mostly < 4 mm long. Hairs on peduncles, pedicels and buds > 1 mm long (NT & WA, E & SE of Pilbara bioregion) **G. polyzygum**
 - 2: Leaves mostly with 5–10 pairs of slightly or non overlapping leaflets; leaflets mostly > 4 mm long. Hairs on peduncles, pedicels and buds c. 0.8 mm long (Pilbara bioregion) **G. oreophilum**

Gompholobium karijini Chappill, *Austral. Syst. Bot.* 21(2): 122 (2008). *Type*: Hamersley Gorge, Karijini National Park, Western Australia, [precise locality withheld for conservation reasons] 2 September 1991, *M.E. Trudgen & S.M. Maley* 10580 (*holo*: PERTH 06090508!; *iso*: AD!, CANB!, K!, MEL 2348044!, NSW!).

Erect *shrub* 0.4–0.7 × 0.6–1.3 m, not viscid. *Branchlets* straight, glabrous or with occasional, spreading, straight hairs c. 0.8 mm long; ribs absent. *Stipules* subulate, erect or scarcely recurved, 1.5–3 × 0.2–0.3 mm, glabrous except for apical tuft of hairs. *Leaves* imparipinnate with (4)5–10 pairs of opposite or sub-opposite leaflets, glabrous or with a sparse indumentum of spreading hairs c. 0.8 mm long on the rachis and leaflets; petiole 0.6–2.1 mm long; petiolules 0.5–0.6 mm long. *Leaflets* all similar, elliptic or obovate, (3.1–)4–6.5(–8.5) × (1.2–)2.5–5 mm, not tuberculate, discolorous, olive green or grey-green, not glaucous; bases attenuate; margins entire and flat; apices sub-acute or obtuse, rarely acute and straight. *Flowers* 4–100+ in simple or compound racemes (4–)15–20 cm long at apex of branchlets. *Peduncles* 3.5–20 mm long, glabrous or with occasional, spreading, straight hairs to 1 mm long. *Pedicels* 5–8 mm long, glabrous or with occasional, spreading, straight or wavy hairs c. 1 mm long. *Bracts* early-caducous, subulate, 3–5 × 0.3–0.5 mm, glabrous (or rarely with occasional hairs) with tuft of white hairs at apex. *Bracteoles* early-caducous, inserted on upper third of pedicel, subulate, 3.5–4 × 0.2–0.3 mm, glabrous except for a tuft of white hairs at apex. *Buds* ellipsoid, 6.5–7.3 × 3.5–4 mm, red-brown or dark green, glabrous except for short hairs to 0.15 mm long on calyx lobe margins, with tips of calyx lobes fused; apiculum absent or straight, 0.1–0.2 mm long. *Hypanthium* 1.2–1.5 mm long. *Calyx* with adaxial lobes fused at base for 1.5–2 mm, symmetrical, 5.3–6.6 × 2–2.5 mm, the abaxial lobes fused at base for 1.4–1.8 mm, symmetrical, 5.3–6.6 × 1.7–2.5 mm. *Standard* with a claw 1.5–2 × 0.9–1 mm and a broadly ovate lamina 10–11 × 12–12.2 mm, without auricles, yellow to yellow-

orange on both surfaces, with creamish green eye markings, emarginate with indentation 0.8–1.3 mm deep; *wings* straight, narrowly obovate, yellow to orange, 10–11 × 2.8–3.6 mm including claw, the apex obtuse; *keel* creamish yellow, 9.5–12 × 4.3–5.8 mm including claw, the apex straight and obtuse. *Stamens* with green or red filaments 8.5–9.7 × 0.3–0.5 mm; anthers sub-basifixed, narrowly ovoid, uniform in size, 1.3–1.4 × 0.5–0.6 mm, white with a narrow, red connective. *Gynoecium* with a stipe 0.3–0.8 mm long; ovary 4.3–4.5 × 1.5–1.8 mm, glabrous; style c. 9.5 × 0.7 mm long, glabrous or rarely with a dense indumentum of spreading hairs to 0.6 mm long; ovules 2, the funicles c. 1.3 mm long. *Fruit* (immature) ellipsoid, glabrous, c. 7 × 7 mm. *Seed* only seen immature. (Figure 1)

Flowering period. January, and August to September.

Selected specimens examined. WESTERN AUSTRALIA: Wittenoom area, 5 Aug. 1971, *A.M. Ashby* 4172 (PERTH); Wittenoom district, Jan. 1972, *L. McGuire s.n.* (PERTH); plateau above Wittenoom Gorge, Karijini National Park, 18 Aug. 1963, *J.S. Beard* 2884 (PERTH); Rio Tinto Gorge, NW of Wittenoom, 2 Sep. 2011, *M.E. Trudgen & E.A. Griffin* MET 23685 (BRI, DNA, PERTH); Hamersley Gorge, Karijini National Park, 24 Sep. 2006, *N.G. Walsh, D. Halford & D. Mallinson* NGW6538 (PERTH).

Distribution. *Gompholobium karijini* is confined to the Karijini National Park in the Pilbara bioregion of north-western Western Australia, near Hamersley Gorge and Wittenoom Gorge. Further collections of this form have indeterminate localities (Figure 2).

Habitat. *Gompholobium karijini* occurs in open *Triodia* hummock grassland with scattered shrubs and trees on ironstone gravel. In addition to the material cited in this paper, one of us (MET) has seen twenty-five sterile collections of *G. karijini* collected from an area west of Karijini National Park. Of these collections, seventeen were collected from sites on Robe Pisolite and the others were mostly from colluvium and alluvium types that appear to overly Robe Pisolite in valley floors (Griffin & Trudgen 2009; limitations in geological maps mean that a few specimens could not be confidently assigned to a geological type). The type specimen of *G. karijini* is also from a similar rock type to



Figure 1. *Gompholobium karijini*. A – habit; B – flowers. Photographs by M.E. Trudgen from *M.E. Trudgen* MET 23684.

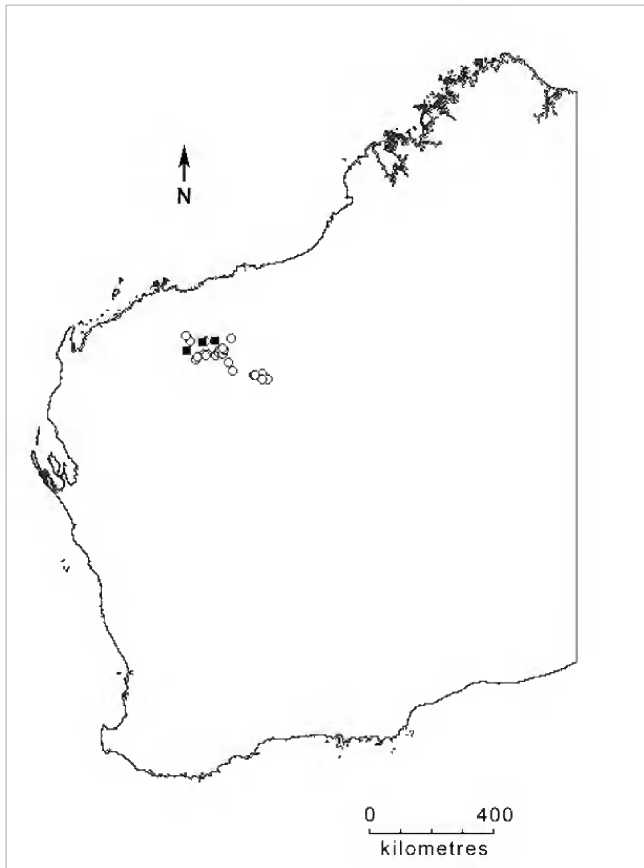


Figure 2. Distribution of *Gompholobium karijini* (■) and *G. oreophilum* (○).

Robe Pisolite, as it was from a cemented colluvium. *Gompholobium karijini* occurs on the younger geological types in the region.

Conservation status. *Gompholobium karijini* is listed as Priority Two under Department of Environment and Conservation (DEC) Conservation Codes for Western Australia Flora (Smith 2010) as it is only known from a few populations, some of which are not thought to be under immediate threat.

Notes. *Gompholobium karijini* differs from *G. polyzygum* and *G. oreophilum* most obviously in being a nearly glabrous plant. The outer surface of the calyx is glabrous except for the margins of the lobes, rather than being densely villous throughout. For details of further differences, see under *G. polyzygum* and *G. oreophilum*.

The protologue for *G. karijini* (Chappill *et al.* 2008) is no longer correct as it includes features of the densely villous form that is the new species *G. oreophilum*. The illustration presented as *G. karijini* in Figure 35 of that paper is of *G. oreophilum*.

A number of possible hybrids with *G. oreophilum* are known (see under that species for a discussion of these).

Gompholobium oreophilum* C.F. Wilkins & Trudgen, *sp. nov.

Typus: Mount Sheila, Hamersley Range, Western Australia [precise locality withheld for conservation reasons], 2 September 2011, *M.E. Trudgen & E.A. Griffin* MET 23684 (*holo*: PERTH 07862725; *iso*: CANB, K, MEL).

Gompholobium sp. Pilbara (N.F. Norris 908), Western Australian Herbarium, in *FloraBase*, <http://florabase.dec.wa.gov.au> [accessed 7 November 2011].

Erect *shrub* 0.4–0.6 × 0.6–1 m, not viscid. *Branchlets* straight, with a dense indumentum of spreading, straight hairs 0.4–0.8(–1.2) mm long; ribs faint or absent. *Stipules* subulate, erect or scarcely recurved, 1.5–3 × 0.2–0.3 mm, densely hairy. *Leaves* imparipinnate with (4–)9–10(–12) pairs of opposite or sub-opposite leaflets, with a sparse to moderately dense indumentum of spreading, straight hairs 0.4–0.8 mm long on rachis and leaflets; petiole 1.5–2.6 mm long; petiolules 0.35–0.6 mm long. *Leaflets* elliptic, rarely narrowly ovate or elliptic-obovate (the terminal leaflet elliptic to obovate or rarely narrowly ovate), 4–8 × 2–5 mm, discolorous, mid green to grey-green, not glaucous; bases attenuate, margins entire and flat; apices acute to sub-acute and straight. *Flowers* (5–)13–30 in racemes at apex of branchlets, 3.8–15 cm long. *Peduncles* 2–6.6 mm long, with a dense indumentum of spreading, straight hairs to 0.8 mm long. *Pedicels* 5–9 mm long, with a sparse or dense indumentum of spreading, straight or wavy hairs to 0.8 mm long. *Bracts* late-caducous, subulate, 4–5 × 0.2–0.4 mm, with a dense indumentum of spreading, straight or wavy hairs *c.* 0.5 mm long on entire abaxial surface. *Bracteoles* late-caducous, inserted on upper third of pedicel, subulate, 3.5–6 × 0.2–0.3 mm, densely hairy. *Buds* ellipsoid, 6.5–8.5 × 3.5–4.3 mm, red-brown, with a dense indumentum of spreading, straight hairs to 0.7 mm long, with tips of calyx lobes fused; apiculum absent or straight, *c.* 0.1 mm long. *Hypanthium* 1.5–1.6 mm long. *Calyx* with adaxial lobes fused at base for 1.3–1.8 mm, asymmetrical, with one straight edge, 5.7–6 × 2–2.6 mm, the abaxial lobes fused at base for 1.3–1.4 mm, symmetrical, 5.3–5.7 × 1.8–2.5 mm. *Standard* with a claw 1.7–2.4 × 0.9–1.3 mm and a broadly ovate lamina 10.2–12 × 12–16.5 mm, without auricles, yellow to yellow-orange on both surfaces, with cream eye markings, emarginate with indentation 1.2–1.7 mm deep; *wings* straight, narrowly obovate, 10.3–12 × 2.5–4.3 mm including claw, yellow to yellow-orange, the apex obtuse; *keel* 10–12 × 4.5–6 mm including claw, creamish yellow, the apex straight and obtuse. *Stamens* with pale yellow or red filaments 6.3–9.5 × 0.2–0.5 mm; anthers sub-basifixed, narrowly ovoid, uniform in size, 1.3–1.5 × 0.5–0.6 mm, cream-white with a narrow, grey connective. *Gynoecium* with a stipe 0.4–0.7 mm long; *ovary* 4–4.5 × 1.5 mm, with a dense indumentum throughout of spreading, straight hairs *c.* 0.6 mm long; style 6–6.7 × 0.3–0.7 mm, with scattered, spreading, straight hairs *c.* 0.3 mm long on basal third; ovules 2, the funicles *c.* 1.3 mm long. *Fruit* ellipsoid, 6–6.2 × 6–7 mm, with mid-dense, white hairs throughout. *Seeds* ellipsoid, 2.6–2.8 × 2.8 mm, without cuticular wrinkles, tan-brown with black spots. (Figures 3, 4)

Flowering period. July to September.

Selected specimens examined. WESTERNAUSTRALIA: Old Mt Bruce to Marandoo Road, WNW of Mount Bruce, 11 Oct. 1994, *B. Bromilow* 25 (PERTH); above Dales Gorge, 8 Aug. 1974, *G.W. Carr & A.C. Beaunglehole* C4821 (K, PERTH); Site 138, Munjina E gorge lookout, 31 May 1999, *G. Cassis* H85 (PERTH); W of Newman, 1 Nov. 1999, *J.A. Chappill & C.F. Wilkins* 6331 (PERTH); Yandicoogina, 9 Sep. 1980, *K.J. Gibbons* 46 (PERTH); NNE of Mount Windell, ESE of Karijini National Park headquarters, 27 July 1991, *S. van Leeuwen* 817 (CANB, PERTH); SE of The Governor, S of Mount Robinson, NNE of Padtherung Hill, 18 Sep. 1991, *S. van Leeuwen* 1043 (PERTH); Caliwingina Creek, N of Tom Price, 9 Sep. 1996, *A.A. Mitchell* PRP 1507 (PERTH); SW of Mount Bruce, 10 Oct. 1977, *M.E. Trudgen* 1861 (CANB, K, PERTH); N of Munjina Roadhouse, between Newman and Karratha,

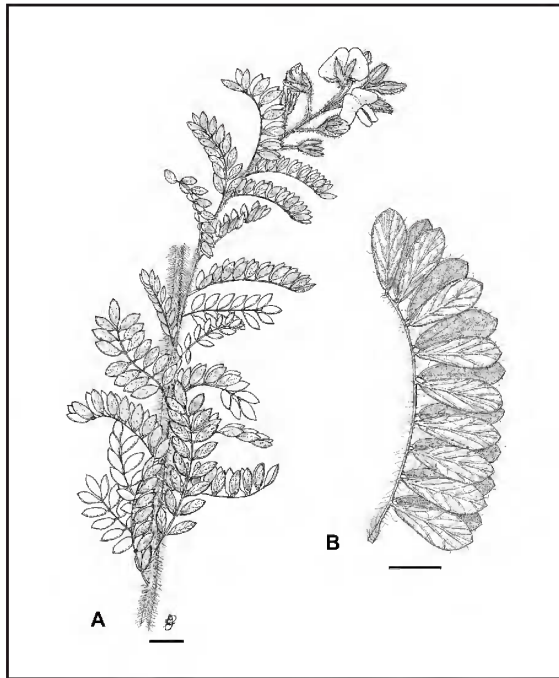


Figure 3. *Gompholobium oreophilum*. A – habit; B – leaf detail (A.A. Mitchell PRP 1507, drawn by L. Cobb). Scale bars = 10 mm (A), 2.5 mm (B).



Figure 4. *Gompholobium oreophilum* A – habit; B – flowers. Photographs by M.E. Trudgen from M.E. Trudgen MET 23706.

M.E. Trudgen & E.A. Griffin 23683, 1 Sep. 2011 (PERTH); E of Joffre Falls, 9 Aug. 1974, *J.H. Willis s.n.* (MEL); track to Eric's Point, Karijini National Park, 17 Sep. 2006, *C. Wilkins, S. van Leeuwen, D. Halford & D. Mallinson* 2214 (CANB, PERTH); Mount Bruce Road from Yampire Gorge Road, Karijini National Park, 12 Sep. 1991, *Peter G. Wilson & R. Rowe* 1040 (CANB, NSW, PERTH).

Distribution. *Gompholobium oreophilum* is confined to the north-west of Western Australia in the Pilbara bioregion, mainly in the Hamersley Range in an area centred on and extending to the east and west of Karijini National Park. There are also a few records from the Chichester Range (Figure 2).

Habitat. *Gompholobium oreophilum* occurs in open woodland, with scattered shrubs and *Triodia* hummock grassland, in red clay on ironstone gravel, often close to banded ironstone outcrops. Collections of *G. oreophilum* are largely from hillslopes in erosional positions. For example, the type specimen for *G. oreophilum* was collected from just below the crest of Mount Sheila, although the species also grows on the lower slopes of this large mountain. This is in contrast to the habitat of the majority of *G. karijini* populations, which grow in Robe Pisolite or colluvium and alluvium soil types over Robe Pisolite in valley floors (Griffin & Trudgen 2009).

It is fairly clear that the two *Gompholobium* species in the Pilbara bioregion are largely spatially separated by preference for different geological and habitat types.

Conservation status. *Gompholobium oreophilum* is widespread and not threatened at this time.

Etymology. From the Greek *oreos* = mountain and *philos* = loving, as the new species occurs on or near mountain ranges.

Notes. *Gompholobium oreophilum* differs from *G. karijini* in having lateral leaflets that are elliptic or rarely narrowly ovate rather than obovate, with the apex acute to sub-acute rather than obtuse. The outer surface of the calyx is densely hairy rather than glabrous, and the inner surface of the calyx has long, villous hairs towards the margin of the lobes rather than short, crisped hairs. The leaves have a medium density of hairs on the rachis and leaflets rather than no, or occasional, hairs. Bracts and bracteoles are late-caducous or persistent and villous-hairy, rather than early-caducous and either glabrous apart from an apical tuft, or only sparsely hairy throughout.

Specimens from the Chichester Range are somewhat less hairy than those from the Hamersley Range.

Five PERTH specimens (*M.E. Trudgen* 394, *M.E. Trudgen* 23682, *R. Butler* 13, *A.C. Beaglehole* 11472 and *M.E. Ballingall* 1844), that have hairs on the outer surface of the calyx, are possibly hybrids between *G. karijini* and *G. oreophilum*. They have leaflets that are intermediate in shape between these two species (Figure 5) and are less hairy than those of *G. oreophilum*. While the putative hybrids do have densely hairy stems like *G. oreophilum*, the hairs on the stems and leaflets are shorter than on typical material of this species.

Gompholobium polyzygum F.Muell., *Fragm.* 3: 29 (1862). *Burtonia polyzyga* (F.Muell.) Benth., *Fl. Austral.* 2: 51 (1864). *Type:* 'Inter montem Morphett et flumen Bonney' [between Mount Morphett and Bonney River], Northern Territory, *J.M. Stuart s.n.* (*holo:* MEL 624364; *iso:* K).

Burtonia polyzyga (F.Muell.) Benth. var. *multijuga* F.Muell. ex Ewart, *Proc. Roy. Soc. Victoria* 19: 36 (Feb. 1907). *Type*: ‘*Burtonia multijuga* F.Muell. Forrest’s Expedition, 13 July 1874’ [location unknown, probably from Forrest’s 3rd expedition in 1874, between Geraldton, Western Australia, and Peake Telegraph Station, South Australia] (*holo*: MEL 624684, image!).

Burtonia multijuga Ewart, *Proc. Roy. Soc. Victoria* 19: 36 (Feb. 1907), *nom. inval.*, given in synonymy under *Burtonia polyzyga* var. *multijuga*.

Erect or prostrate *shrub* 0.3–1.5 × 0.3–0.6 m, not viscid. *Branchlets* straight, with a dense indumentum of spreading, straight or curly hairs *c.* 1.1 mm long; ribs absent. *Stipules* subulate, recurved, sometimes erect, 1.3–3.5 × 0.15–0.3 mm, densely hairy. *Leaves* imparipinnate with (6–)16–21 pairs of opposite, overlapping leaflets; petiole 1.3–4 mm long, with scattered, spreading, straight or curly hairs *c.* 0.4 mm long on rachis and leaflets; petiolules 0.3–0.4 mm long. *Leaflets* all similar, elliptic, broad-elliptic, broad-obovate or sub-rotund, (1.5–)2–3.5(–5) × 1.6–3.3 mm, not tuberculate, concolorous, grey-green, not glaucous; bases attenuate; margins entire and flat; apices obtuse to rounded and straight. *Flowers* 5–16 in racemes at apex of branchlets; subtending leaves not longer than inflorescence. *Peduncle* 6–14 mm long with a dense indumentum of spreading, wavy hairs *c.* 1.3 mm long. *Pedicels* 4–10 mm long with an indumentum as for the peduncle. *Bracts* subulate, 3.5–10 × 0.4–0.8 mm, with a dense indumentum of spreading, wavy hairs *c.* 1.2 mm long on entire abaxial surface. *Bracteoles* persistent, inserted on upper third of pedicel, subulate, 3.1–9.5 × 0.25–0.5 mm, with a dense indumentum of spreading, wavy hairs *c.* 1 mm long on entire abaxial surface. *Buds* ellipsoid, reddish brown, 7.5–8.1 × 3.5–4.2 mm, with a dense indumentum of spreading, wavy hairs *c.* 1.5 mm long, the tips of the calyx lobes fused; apiculum absent. *Hypanthium* 1–1.4 mm long. *Calyx* with adaxial lobes fused at base for 1.5–2.3 mm, slightly asymmetrical, 5.1–7 × 2.1–2.5 mm, the abaxial lobes fused at base for 0.8–1.8 mm, symmetrical, 5.3–6.5 × 1.7–2.1 mm. *Standard* with a claw 1.3–2.8 × 1.1–1.3 mm and lamina 9.5–11.8 × 11–14 mm, without auricles, yellow-orange to orange on both surfaces, without eye markings, emarginate with indentation 0.4–2.5 mm deep; *wings* straight, basal lobe on upper margin

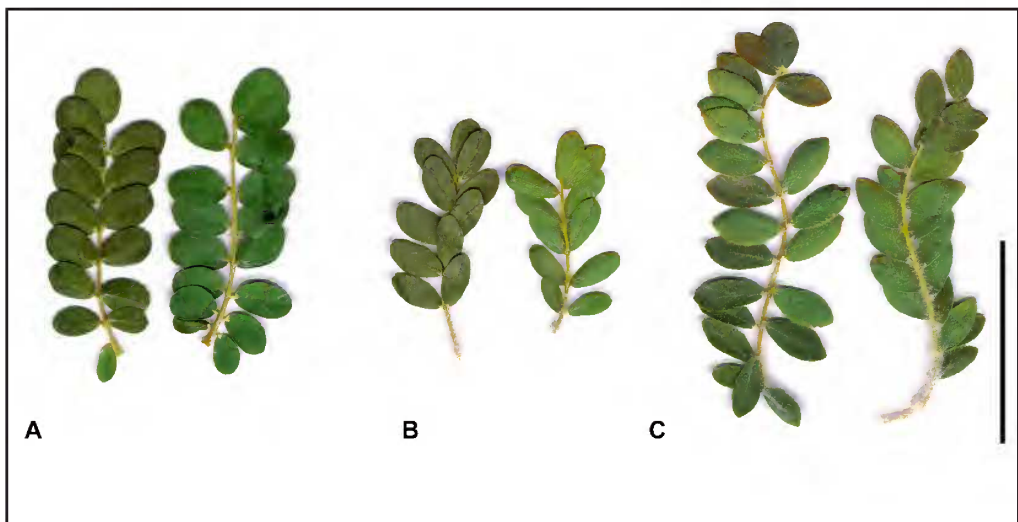


Figure 5. Leaves. L, upper surface, R, lower surface. A – *Gompholobium karijini*, (M.E. Trudgen MET 23684); B – *G. karijini* × *oreophilum* (M.E. Trudgen MET 23682); C – *G. oreophilum* (M.E. Trudgen MET 23706). Scale bar = 2 cm.

present or absent, orange-yellow to orange, 10–12 × 3.5–4.3 mm including claw, the apices obtuse; *keel* orange or yellow-green, 10–12 × 4–5 mm including claw, the apex straight, obtuse. *Stamens* with pale green filaments 7.6–11 × 0.2–0.6 mm; *anthers* sub-basifixed, narrowly ovoid, uniform in size, 0.8–1.8 × 0.3–0.9 mm, cream with a narrow, red connective. *Gynoeceium* with a stipe 0.5–0.8 mm long; ovary 3.1–4.3 × 1.3–1.5 mm, with a dense indumentum of spreading, straight hairs c. 1.3 mm long; style 5.5–7.8 × 0.25–0.3 mm, with scattered, spreading, straight hairs c. 0.3 mm long on basal two-thirds; ovules 2, the funicles 1.3–2.2 mm long. *Fruit* 5.5–7 × 6.5–7.8 mm, with a dense indumentum of spreading, straight hairs c. 1.5 mm long throughout. *Seeds* ellipsoid, 2.5–2.9 × 1.9–2.3 mm, without cuticular wrinkles, yellow-brown or tan, with dark red or black markings.

Flowering period. April to November.

Selected specimens examined. NORTHERN TERRITORY: near Ulambaura Spring, Haast Bluff, 23 Aug. 1956, *G. Chippendale* 2578 (BRI, DNA, MEL, NSW, PERTH); Mannanana Range, Petermann River Reserve, 10 Sep. 1978, *T.S. Henshall* 2144 (BRI, MEL, NT, PERTH); Elkedra Station; jump up towards Hatches Creek, 8 Oct. 1979, *T.S. Henshall* 2747 (CANB, DNA, MEL); Neutral Junction Station, 7 Apr. 1974, *P.K. Latz* 5614 (CANB, DNA); Ewalinga Rockhole, E of Docker Creek Settlement, 18 Sep. 1969, *J.R. Maconochie* 758 (BRI, CANB, DNA, PERTH); NE of Docker River Settlement, 27 Aug. 1973, *J.R. Maconochie* 1870 (AD, CANB, DNA, MO). WESTERN AUSTRALIA: N of Kumarina, 1 Nov. 1999, *J.A. Chappill & C.F. Wilkins* 6321 (PERTH); SW of Warburton Mission, 30 Aug. 1973, *N.N. Donner* 4493 (AD, PERTH); Little Lofty Ranges, Oct. 1991, *H.N. Foote* 48 (PERTH); N of Neale Junction, Gibson Desert, 18 July 1974, *A.S. George* 11998 (CANB, PERTH); Rudall River National Park, 17 Aug. 1994, *A.E. de Jong s.n.* (PERTH); Barlee Range Nature Reserve, SE of Wongida Well, SSE of Mount Florry, W of Culcra Bore, Barlee Range, 17 Aug. 1994, *S. van Leeuwen* 1653 (PERTH); S of Kumarina roadhouse, Oct. 1997, *M. Ochtman* LCS 4119 (PERTH); track along Rabbit Proof fence, Little Sandy Desert, 14 Aug. 2001, *C.F. Wilkins, S. van Leeuwen, K.A. Shepherd, S. Hopper, P. Nikulinski, B. Bromilow & S. Scourfield* 1475 (PERTH).

Distribution. *Gompholobium polyzygum* occurs in arid inland areas of the Northern Territory and Western Australia. At the western end of its range it skirts the eastern and south-eastern margins of the Pilbara bioregion. It may occur in the far-eastern part of this bioregion, but does not overlap the distribution of *G. oreophilum* or *G. karijini* (Figure 6).

Habitat. *Gompholobium polyzygum* grows in open shrubland or *Triodia* hummock grassland on lateritic gravel, red sandy loam, sandstone or skeletal quartzite.

Conservation status. *Gompholobium polyzygum* is widespread in Western Australia and the Northern Territory and is not considered to be under threat at this time.

Notes. *Gompholobium polyzygum* differs from *G. karijini* and *G. oreophilum* in having leaves with more numerous leaflets that are also smaller, more rotund, more crowded and overlapping, and in having generally broader bracts and bracteoles (0.4–0.8 mm compared to 0.2–0.5 mm wide). In addition, it differs from *G. karijini* in being a hairy plant with persistent bracteoles, and from *G. oreophilum* in having longer hairs (1–1.3 mm long compared to 0.4–0.8 mm long).

There is significant variation in this species in the areas east of the Pilbara bioregion. This variation requires detailed study to resolve and is beyond the scope of this paper.

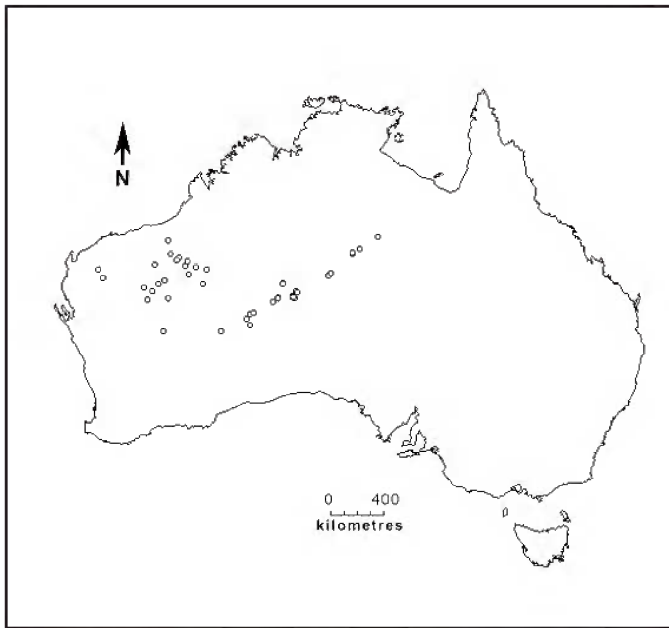


Figure 6. Distribution of *Gompholobium polyzygum*.

Acknowledgements

Western Australia's Department of Environment and Conservation is acknowledged for financial assistance received through a Specific Nature Conservation Project grant within the Nature Conservation Service. Thanks also to Lorraine Cobb (deceased) for the fine illustration and Ian Thompson for his helpful comments on the manuscript.

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